

## **AMENDMENTS TO THE CLAIMS**

*Please amend the Claims as follows:*

**Please cancel claims 1-29.**

**Please add claims 30-44 as follows:**

**30. (Newly Added)** A computer-based method for validating a fragment of a structured document, said computer-based method implemented in computer readable program code, said computer readable program code stored in computer memory, said computer-based method comprising steps of:

- receiving as input a fragment of a structured document into a runtime validation engine;
- outputting a validation pass message as follows:
  - obtaining a first token from said fragment of said structured document,
  - determining whether said first token is of element type said fragment of said structured document that is to be validated against, and if so,
  - obtaining next token from said fragment of said structured document,
  - checking whether said next token signifies end of said fragment of said structured document, and if so, returning a validation pass if an annotated automaton encoding (AAE) stack is empty; andif said next token does not signify end of said fragment of said structured document, continuing validation as in validating an entire structured document, and when successfully validated as in an entire structured

document, returning to step iii until end of said structured document token is received and outputting a validation pass when AAE stack is empty.

**31. (Newly Added)** The computer-based method of claim 30, wherein, when first token is not of said element type, or when said continued validation as in validating an entire document fails in step iv or when said AAE stack is not empty, said method returns a validation failure message.

**32. (Newly Added)** The computer-based method of claim 30, wherein said structured document is an XML document.

**33. (Newly Added)** The computer-based method of claim 30, wherein said wherein said first or next token is either an element type name or an attribute name.

**34. (Newly Added)** The computer-based method of claim 30, wherein said first or next token is a lexeme, said lexeme being any of the following: a start tag name, an attribute name, or an end tag name.

**35. (Newly Added)** The computer-based method of claim 30, wherein said computer-based method is implemented in conjunction with a database.

**36. (Newly Added)** A computer-based method for validating a fragment of a structured document, said computer-based method implemented in computer readable program code, said computer readable program code stored in computer memory, said computer-based method comprising steps of:

- receiving as input a fragment of an XML document into a runtime validation engine;

- outputting a validation pass message as follows:

- obtaining a first token from said fragment of said XML document,
- determining whether said first token is of element type said fragment of said XML document that is to be validated against, and if so,
- obtaining next token from said fragment of said XML document,
- checking whether said next token signifies end of said fragment of said XML document, and if so, returning a validation pass if an annotated automaton encoding (AAE) stack is empty; and  
if said next token does not signify end of said fragment of said XML document, continuing validation as in validating an entire XML document, and when successfully validated as in an entire XML document, returning to step iii until end of said fragment of said XML document token is received,

wherein, when first token is not of said element type, or when said continued validation as in validating an entire document fails in step iv or when said AAE stack is not empty, said method returns a validation failure message.

**37. (Newly Added)** The computer-based method of claim 36, wherein said first or next token is either an element type name or an attribute name.

**38. (Newly Added)** The computer-based method of claim 36, wherein said first or next token is a lexeme, said lexeme being any of the following: a start tag name, an attribute name, or an end tag name.

**39. (Newly Added)** The computer-based method of claim 36, wherein said computer-based method is implemented in conjunction with a database.

**40. (Newly Added)** An article of manufacture comprising a computer usable medium having computer readable program code embodied therein which implements a computer-based method for validating a fragment of a structured document, said computer-based method implemented in computer readable program code, said computer readable program code stored in computer memory, said computer usable medium comprising:

- computer readable program code aiding in receiving as input a fragment of a structured document into a runtime validation engine;
- computer readable program code aiding in outputting a validation pass message as follows:
  - computer readable program code aiding in obtaining a first token from said fragment of said structured document,
  - computer readable program code determining whether said first token is of element type said fragment of said structured document that is to be validated against, and if so,
  - computer readable program code aiding in obtaining next token from said fragment of said structured document,

- computer readable program code checking whether said next token signifies end of said fragment of said structured document, and if so, returning a validation pass if an annotated automaton encoding (AAE) stack is empty; and  
if said next token does not signify end of said fragment of said structured document, computer readable program code continuing validation as in validating an entire structured document, and when successfully validated as in an entire structured document, computer readable program code returning to step iii until end of said structured document token is received and outputting a validation pass when AAE stack is empty.

**41. (Newly Added)** The article of manufacture of claim 40, wherein, when first token is not of said element type, or when said continued validation as in validating an entire document fails in step iv or when said AAE stack is not empty, computer readable program code returns a validation failure message.

**42. (Newly Added)** The article of manufacture of claim 40, wherein said structured document is an XML document.

**43. (Newly Added)** The article of manufacture of claim 40, wherein said wherein said first or next token is either an element type name or an attribute name.

**44. (Newly Added)** The article of manufacture of claim 40, wherein said first or next token is a lexeme, said lexeme being any of the following: a start tag name, an attribute name, or an end tag name.